

ICT

Preparation book

6th Prim



2024 - 2025



Teacher's Biography

Name:

School:

The educational administration:.....

Qualification:

Teaching Subject:

Comprehensive School:

The school to which he is delegated:

Date of appointment:

The job is on the staff:

Teacher Code:

Mobile Number:

Teacher

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Supervisor

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School Principal

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Daily Class Schedule

Period Day	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth
Saturday									
Sunday									
Monday									
Tuesday									
Wednesday									
Thursday									

Period Day	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth
Saturday									
Sunday									
Monday									
Tuesday									
Wednesday									
Thursday									

Teacher

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Supervisor

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School Principal

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The specific objectives of computer and information technology

- **Providing** students with the appropriate amount of scientific and basic knowledge and skills related to how to solve problems.
- **Develop** basic scientific thinking skills.
- **Gain the** ability to use technical means , multimedia, and networks and employ them as tools to serve and integrate with different fields of study
- **Training** students to work within a team by practicing computer techniques.
- **Creates** Websites and determines their characteristics.
- **Developing students'** awareness of the importance of technological awareness and cultural communication.
- **Acquire concepts** related to the principles of web page design.
- **Appreciation of** the role played by science and scientists.
- **Recognize** On the suite of Microsoft Office programs.
- **Raising students'** awareness of the concept of information ethics and the rules of safe use of the Internet.
- **Collects** data and presents it in an interesting way.
- **Specifies** how ICT tools can help make his school more inclusive
- **Discuss** different scenarios/contexts and choose the appropriate computer and network devices
- **Discusses** how future technology can improve the education sector and daily life
- **Discuss** Aspects of the experience of users of advanced technology and artificial intelligence.
- **Shares his** ideas for developing the latest assistive technology product.
- **Provides suggestions** on how mobile devices can support the learning process
- **Innovates** an idea to create a website that promotes An advanced product in its category Assistive technology

Teacher

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Supervisor

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School Principal

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The specific objectives of computer and information technology

- **Identifies** how ICT tools can help make my school more inclusive.
- **Searches** for websites with static and dynamic designs.
- **Describe** the role of information and communications technology in helping others.
- **Describe** Components of a computer network.
- **Describes** how network devices work.
- **Explain** The following terms: virtual and augmented reality and artificial intelligence
- **Give** Examples of virtual and augmented reality and artificial intelligence.
- **Discusses** aspects of the user experience of advanced technology.
- **Shares** his ideas for developing the latest assistive technology product.
- **Evaluate** the most advanced proposed technological product
- **Uses** keyboard shortcuts such as copy, cut, and paste to process text.
- **Differentiates** between database, library and online searches.
- **Determine** the most effective search tool for a specific goal
- **Identify** common features in mobile devices. .
- **Offers suggestions** on how mobile devices can support learning.
- **Describes** how mobile devices can improve the lives of people of determination.
- **Explain** what an operating system is.
- **Compare** the most common computer operating systems and mobile phone operating systems
- **Identify** my device operating systems and discuss the HTML programming language
- **Writes** Markup language code for basic parts of a web page
- **Specifies** Some components of the markup language of a web page
- **Innovates** An idea to create a website that promotes An advanced product in its category
Assistive technology
- **Identify** ways in which remote sensing technology can help his governorate.
- **Discusses** the Risks of electronic games
- **Explains** ways to avoid the dangers of electronic games
- **Specifies** The impact of electronic games on his health and explains ways to deal with this through family care
- **Identify** the different features that can be used to protect data
- **Known** Cyber security concept
- **Creates** a plan to deal safely with the Internet
- **Discuss** cybersecurity issues
- **Explain** what copyright is and why it is important
- **Discuss** the concept of electronic financial trading
- **Explains** Cloud computing concept
- **Specifies** Pros and cons of using cloud computing
- **Discusses** the The role of cloud computing in file storage
- **Discuss** the characteristics of valuable or reliable sources
- **Explain** the importance of evaluating sources
- **Evaluate** the resources he finds on the Internet.

Teacher

Supervisor

School Principal



Distribution of the content of computer, Information Technology and communication

**For the 6th primary grade –
First term for year 2024-2025**

Week		Lessons	Content
First Axis: The role of information and communications technology in our lives			
1		1	Explorer in Action
		2	Computer network devices
2		3	Technology and artificial intelligence (AI)
3		4	Evaluating cutting – edge technology
4		5	Digital research skills
5		6	Mobile devices
		7	Operating system
6		8	Website design
7		General Review on Axis One	
Second Axis: Digital security and safety precautions			
8		1	Explorer in Action
		2	How to deal with electronic games
9		3	Protecting yourself from digital theft
10		4	Cyber security
11		5	Copyright and electronic financial trading
12		6	Cloud storage of files
13		7	Cloud computing applications
14		General Review on Axis One	
15		First semester's projects	

Teacher

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School Principal

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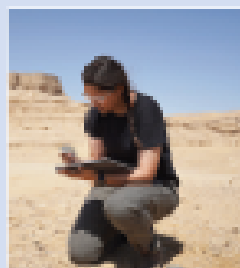
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THEME 1 Role of Information and Communication Technology (ICT) in our lives

Essential Question: How can we use ICT tools to help keep up with current developments?

LESSON	TOPICS	SKILLS INTEGRATION		
		Life skills	Values	Issues and challenges
LESSON 1 Explorer in Action	<ul style="list-style-type: none"> How computer software can be used Plan a website 	Learning to know: problem solving; creativity	Work values: perseverance Personal values: independence	Globalization issues: entrepreneurship Discrimination issues: discrimination against people with special needs
LESSON 2 Computer network devices	<ul style="list-style-type: none"> The different elements used in a computer network How computers and digital devices connect 	Learning to know: problem solving Learning to be: communication	Scientific values: objectivity	Globalization issues: technological awareness
LESSON 3 Technology and artificial intelligence (AI)	<ul style="list-style-type: none"> What virtual reality, augmented reality, and artificial intelligence are How technologies can improve people's lives 	Learning to know: creativity; problem solving	Scientific values: objectivity	Globalization issues: entrepreneurship
LESSON 4 Evaluating cutting-edge technology	<ul style="list-style-type: none"> What assistive technology is How cutting-edge technology can be used in society 	Learning to know: problem solving Learning to do: co-operation	Personal values: independence Work values: perseverance	Citizenship issues: awareness of rights and duties Discrimination issues: discrimination against people with special needs Globalization issues: technological awareness
LESSON 5 Digital research skills	<ul style="list-style-type: none"> Using digital search tools Types of digital search tools 	Learning to know: problem solving Learning to be: sharing	Work values: perseverance; co-operation	Discrimination issues: discrimination against people with special needs Globalization issues: technological awareness
LESSON 6 Mobile devices	<ul style="list-style-type: none"> Features of mobile devices How smartphones can help people 	Learning to know: problem solving	Personal values: independence	Citizenship issues: awareness of rights and duties Globalization issues: civilizational communication
LESSON 7 Operating systems	<ul style="list-style-type: none"> Types of mobile operating systems What HTML is 	Learning to know: problem solving Learning to do: co-operation	Work values: perseverance	Globalization issues: technological awareness
LESSON 8 Website design	<ul style="list-style-type: none"> What HTML tags are Using HTML on a webpage 	Learning to know: creativity; problem solving	Personal values: independence Work values: persistence	Globalization issues: technological awareness; entrepreneurship



THEME 2 Digital safety and security precautions

Essential Question: How can we use ICT tools safely?

LESSON	TOPICS	SKILLS INTEGRATION		
		Life skills	Values	Issues and challenges
LESSON 1 Explorer in Action	<ul style="list-style-type: none"> How Remote Sensing can be used Design an application 	Learning to know: problem solving Learning to do: decision making	Scientific values: objectivity Work values: perseverance	Globalization issues: technological awareness; digital citizenship
LESSON 2 How to deal with electronic games	<ul style="list-style-type: none"> The dangers of electronic games The impact of electronic games on my health 	Learning to know: problem solving Learning to live: self-management	Personal values: independence	Citizenship issues: awareness of rights and duties Health and population issues: preventive health
LESSON 3 Protecting yourself from digital theft	<ul style="list-style-type: none"> Ways to protect your devices Why companies need to protect their data 	Learning to know: problem solving Learning to live: self-management	Scientific values: objectivity Personal values: independence Work values: co-operation	Globalization issues: technological awareness
LESSON 4 Cyber security	<ul style="list-style-type: none"> How to be safe online Types of cyber security threats 	Learning to live: self-management Learning to do: decision making	Personal values: independence Work values: perseverance	Globalization issues: technological awareness; digital citizenship
LESSON 5 Copyright and electronic financial trading	<ul style="list-style-type: none"> What copyright is What electronic financial trading is 	Learning to live: self-management	Personal values: independence Work values: co-operation	Globalization issues: technological awareness; digital citizenship
LESSON 6 Cloud storage of files	<ul style="list-style-type: none"> What cloud computing is Storing files on cloud 	Learning to do: decision making	Personal values: independence; participation	Globalization issues: technological awareness
LESSON 7 Cloud computing applications	<ul style="list-style-type: none"> Examples of cloud computing applications The features of different cloud computing applications 	Learning to live: self-management Learning to do: decision making	Personal values: independence Work values: collaboration	Globalization issues: technological awareness

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First Axis The role of information and communications technology in our lives

Lesson 1: "Active Explorer" Kartik Sawhney

Lesson objectives: By the end of this lesson the student will be able to:

- **Identify** how ICT tools can help make my school more inclusive.
- **Research** websites with static and dynamic designs.
- **Describe** the role of information and communications technology in helping others.

Strategy:

Flipped classroom- Dialogue and discussion - Cooperative learning

Teaching aids:

Electronic board- Student's book - video by Kartik Sawhney

Warm Up :

Why is it important for everyone to use ICT tools?



Lesson Presentation

□ **Mr. Kartik Sawhney**

-Active National Geographic **Explorer A** computer expert who uses technology to empower people of determination
-His studies focused on the interaction between **artificial intelligence** and the interaction between humans and computers.

□ **Sawhney's role in supporting and assisting people of determination**

-**Mr. Sawhney** creates applications that allow **blind and visually impaired people** to access visual content. His application converts **graphics into audio frequencies**. Allows the listener to hear the difference in information Graphically.

Istamai .com listening application: Istamai.com _ It is a platform that offers a program that converts digital texts into a format that can be easily used by the blind and visually impaired.

□ **I-stem platform included** (Listening) also offers counseling and employment opportunities for people of determination, through:

Work closely with governments, technological universities and institutions.

The platform is supported by UNICEF, Microsoft, and the National Geographic Community, as well as other partner organizations. People of determination can receive assistance from volunteer trainers in:



□ **Egypt supports people of determination in many places as follows:** In order to help the visually impaired, the Taha Hussein Library in the Bibliotheca Alexandrina contains scanners that include special programs that convert text into sound.

← It provides scholarships and unique opportunities to talented individuals, such as Rania Salah, a skilled computer programmer with Down syndrome.

← Several initiatives were launched to empower Egyptian citizens with disabilities in 2022.

← It guides organizations to integrate employees with disabilities into the workforce and create job opportunities for them.

← The Ministry of Manpower develops programs to educate and train them for the labor market.

□ **Speech voice recognition technology:** It is a technology that converts speech into text. It helps the hearing-impaired to communicate, as it is difficult for them to use a mobile phone because during phone calls the hearing-impaired person speaks but does not hear the other person.

□ **Applications and websites that support this technology:-**

→ **Roger Voice application:** Hearing-impaired people can download and install it on a smartphone, and there is no need for people who receive calls to have a smartphone or to install the application on their phones. More than 50.000 people have downloaded it around the world

→ **Accessnow website:** -provides information and resources related to accessibility for people with disabilities

→ **Be my eyes.com website:** aims to connect blind and visually impaired people with sighted volunteers through video calls.



Evaluation : Put (✓) Or (X):

Technology has helped to make this an easier task. ()

الفصل الدراسي الأول اعداد وتصميم/ جروب فريق أصدقاء الكمبيوتر المتخصص



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First Axis The role of information and communications technology in our lives

Lesson 2: Computer networking devices

Lesson objectives: By the end of this lesson the student will be able to:

- **Describe** Components of a computer network.
- **Describes** how network devices work.
- **It discusses** some Internet connection problems and how to deal with them.

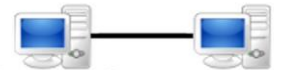
Strategy: Brainstorming - dialogue and discussion - peer learning

Teaching aids: The electronic board - Student's book – a presentation - flashcards for the types of networks

Warm Up : **Networks are groups of people or things linked together for common goals.**

Lesson Presentation

❑ **Networks:** It is a group of people or things linked together for common goals.



❑ **Computer Network:** Connects computers together to share important information and data

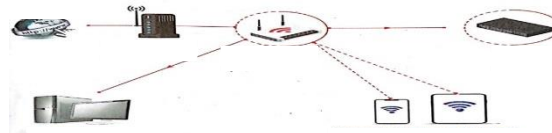
❑ **Establishing a connection:** - There are two types of connection: **Wired Networks Wires** and cables that are connected to holes in devices are used **called ports**. **Wireless networks:** - Through which devices are connected without wires or cables using wireless **radio waves** or “**Wi -Fi**”.

❑ **Port:** It is the place through which input and output devices are connected to the device via cables.



❑ **How to connect computers to the Internet:-**

Internet



❑ **Networking devices:** Computers need different devices to connect to the network, to transfer data.

1- Switches: It works in a similar way to a hub, but it can send data to a specific device over a network, which helps facilitate and speed up communication. It connects to a specific device within a single network.

Note: Switches are smart devices because they send data to only the specified device within the network.

2 –Modem: A device that connects a - LAN to the Internet It converts the signal from the Internet service Provider (ISP) into a digital signal. Devices can receive the signal and recognize it. It is used **to connect users to the Internet**

❑ **Artificial IntelligenceAI** It is machine intelligence that can be used to solve problems. It is a comprehensive term for computer applications that perform tasks that mimic human thinking, such as:

- *** The ability to learn and conclude by providing these technologies with information related to a field,
- ***making guesses, and developing answers to all questions related to this field
- *** Artificial intelligence works to imitate voices by providing it with the tone of a natural human voice



Evaluation:

Complete:..... converts the signal from the Internet service provider (ISP) into a digital signal

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First Axis The role of information and communications technology in our lives

Lesson 3: Technology and artificial intelligence

Lesson objectives: By the end of this lesson the student will be able to:

- **Explain** The following terms: virtual and augmented reality and artificial intelligence
- **Give** Examples of virtual and augmented reality and artificial intelligence.
- **Discuss** how to employ advanced technology in our lives

Strategy:

Cooperative learning - dialogue and discussion

Teaching aids:

Electronic board - Student's book - presentation - cards for robots and electronic devices

Warm Up :

What technological innovations do you think will be created in the next twenty years?

Lesson Presentation

It is possible for us that each of " virtual reality, augmented reality, and artificial intelligence " are future and emerging types of Technology, but it is currently used in the education sector and daily life.

Virtual Reality (VR) :

-A virtual 3D environment that allows users to explore and interact with their surroundings as if they were real.

-mostly what He wears He wears headphones head" especially Made of cardboard to indulge in Virtual reality experience block about them life realism And availability for them Vision 360 degree for a scientist last Where insects or atoms are larger than you, you can also visit a museum thousands of miles away from you or move To an ancient archaeological site by going back thousands of years through history.



Augmented Reality (AR) :

-Combines the real world with virtual reality by adding computer-generated imagery.

-Displays a form 3D to what the real world looks like

-Augmentation can be used by: Smartphone or tablet camera.

AI artificial intelligence:

-It is the ability of a machine like a computer to think and learn .

-The computer can learn by analyzing the provided examples, for example:

-" maybe A smartphone or email program can predict the next word you type of the words you wrote earlier. "



The ability of future technology to improve the education sector and daily life :

-The visually impaired person can To use augmented reality to see his family members up close .

-People of determination can use the AI-enabled virtual personal assistant to accomplish daily tasks, such as : **Telephony - the use of computers using their voice or sign language .**

Put (✓) or (x):-

Augmented reality helps students become active participants in the learning process. ()

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First Axis The role of information and communications technology in our lives

Lesson 4: Evaluation Cutting-Edge technology

Lesson objectives: By the end of this lesson the student will be able to:

- **Discusses** aspects of the user experience of advanced technology.
- **Share** and discuss ideas to develop a cutting edge assistive technological product.
- **Evaluate** the most advanced proposed technological product.

Strategy: Critical thinking – direct dialogue

Teaching aids: Electronic whiteboard - Student's book - presentation

Warm Up : Which applications and games do you enjoy using the most?

Lesson Presentation

- ⊗ **Advanced Technology:** The latest and most advanced version of a service or product.
- ⊗ **Assistive technology:** It helps people of determination to perform tasks that they find difficult, **such as:**

- 1- convert speech to text Programs to text to audio
- 2- Hearing aids
- 3- screen enlargement and software

4- Screen magnification software

5- Scanning and reading machine

-Advanced technology such as (artificial intelligence, augmented reality, and virtual reality) has made changes in life.

-These changes are emerging in exciting new ways to help: education, improve lives and integrate into society

→ **Smart gloves:** In the category of assistive technology, it enables deaf people to translate their signals instantly into textual or spoken output.

- **Note:** - It is important that we evaluate these new technologies objectively and rationally, as they are constantly expanding the horizons of knowledge.
- Through evaluation, society as a whole is better informed to make decisions about the use and development of these technologies.



→ **User experience** User experience describes how people use and interact with a product, and how they evaluate their experiences.

-User experience is often divided into different areas, and can be positive or negative.

To evaluate the experience of a product, you must first answer a set of questions:

Valuable	Does this technology improve my life and help me learn?
Accessible	Is this technology available for people of determination?
useful	Is this technology practical?
Usable	Is it easy to use?
Credible	Are the company and its products trustworthy?
Findable	If there is a problem with the project or service, can I find a solution?
Desirable	Is looking at this technology fun?

→ **Meeting the needs** User experience is related to the development of products and services.

Evaluation: -**Complete:** - It helps people of determination to perform tasks that they find difficult.....

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First Axis The role of information and communications technology in our lives

Lesson 5: Digital research skills

Lesson objectives: By the end of this lesson the student will be able to:

- **Uses** keyboard shortcuts such as copy, cut, and paste in word processing.
- **Differentiate** between database, library and online searches.
- **Identifies** the most effective research tool for a particular goal

Strategy:

Dialogue and discussion - cooperative learning - practical training

Teaching aids:

Electronic whiteboard - Student's book - presentation

Warm Up :

When was the last time you searched the Internet for something?

Lesson Presentation

Useful digital research tools "Search online": -

from more orders to treat the words Common: Copy and pasting And cutting, which is very useful when copying, pasting, or cutting text or text Information about citing sources or images in a word processing file.

Digital research tools

-**Digital research tools such as:** specialized search engines, and reliable electronic libraries available on the Internet help in searching for the required information, but the results issued by each of them are different.

-So knowing the results you need helps determine which search tools you can use.

There are many digital research tools, including

Search Engines - Databases - Specialized Database - Database

Search 1 - Search engines :

-Search engines help people search websites based on key words and phrases.

-It is characterized by being: easy to use and very fast, and often shows many results. **to remember :** You should use your evaluation skills to ensure that the content you choose is reliable, accurate, and unbiased.

2 - Databases

-phrase on groups from Information is stored usually in System my computer and can be accessed free of charge from during school or library.

-Prepare rules Data from good places Search on the information through : Magazines Newspapers and books Bookmark.

General databases : They address many topics , **examples of which are:** Egyptian Knowledge Bank EKB .

subject database : having food topic one Just an **example:** leading businesses

3 - Libraries catalogs :

-index the library he a base data , include all Sources and items that contain it Library .

-may be It includes search in index the library books published newly, With what in that books ethat contains latest Researches in specific topic .

4-Conducting Search the database When searching in any database, you should consider the following:

-Use keyword search

-You can use other fields available in the database to narrow your search, such as: author name or journal title

-Limiting your search to the last few years will help you find the latest research.

Evaluation :

Complete: - It is preferable when searching in any database, use the search with



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First Axis The role of information and communications technology in our lives

Lesson 6: Mobile Devices

Lesson objectives: By the end of this lesson the student will be able to:

- **Identify** common features in mobile devices. .
 - **Offers suggestions** on how mobile devices can support learning.
 - **Describes** How mobile devices can improve the lives of people of determination.
- Dialogue and discussion - cooperative learning - mind maps

Strategy:

Teaching aids:

Electronic whiteboard - Student's book - presentation - boards and pens

Warm Up :

Why is it important to be able to find information easily

Lesson Presentation

Mobile devices include:

→ **Smart phones and tablets:** - Similar to personal computers in that they **are used for** : browsing The Internet, email checking, **and contains**: cameras, speakers, and high-quality screen resolution

→ **E-readers:** They look like tablets and are used to read books

→ **Mobile devices are characterized by:**

- Portability
- Possibility to connect to the Internet
- Can be carried in a horizontal or vertical position or laid flat.
- "touch" technology.
- Connect to other devices.
- Many of them work with



Mobile Devices and Learning: Extend learning beyond the classroom school, for

example: 1 - Create clips video short or capture photo for projects.

2 - Scan symbols response quick **QR codes** to access to the video and clips Acoustic and texts related to By content, Which Create it the teacher And the students themselves.

3- Availability More from opportunities to cooperate from during Use walls to publish Comments via Internet or chapter forums Shared or Chats Collective.

4- Listening to Blogs Audio **podcast** and get on Ratings Special with video games and access to Apps Learning.

Disadvantages of using mobile devices

-be seen some that ease Access to Information may reduce from skills thinking and interaction social and who over a period concentration the people.

Exposure to tempt Use the device Mobile For reasons social or Entertainment Prepare Another problem Possible.

-maybe for screens small that make reading Texts and watch graphics graphic complex order hard.

Providing solutions using advanced assistive technology

-People of determination may face challenges in accessing education, health care and employment without advanced assistive technology products and applications for tablets and smartphones.

Providing solutions using advanced assistive technology:

- People of determination may face challenges accessing education, healthcare, and employment without advanced assistive technology products and applications for tablets and smartphones.
- Advanced assistive technology installed on mobile devices provides new solutions. **For example:**

Speech assistance applications: It helps students with non-verbal learning disorder participate in the classroom.

Evaluation: Complete: - includes smart phones, tablets, and e-readers.



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First Axis The role of information and communications technology in our lives

Lesson 7: Operating systems

Lesson objectives: By the end of this lesson the student will be able to:

- **Explain** what an operating system is.
- **compare** the most common computer and mobile operating systems
- **Identify** my devices' operating systems and discuss the programming language HTML language

Strategy: Dialogue and discussion – brainstorming - question board

Teaching aids: The electronic board - Student's book - a presentation - educational cards with The content of the lesson

Warm Up : What do you notice when moving from one smartphone to another?

Lesson Presentation

Operating systems: It is the program that controls computer functions like **memory** And engines **Discs drivers** and printers __ and other devices....

→ Operatingsystems include ancillary devices **such as** screen readers and magnifiers.

→ Operating systems manage **computer hardware and software**.

→ Operating systems act **as a translator** enabling the user to Communicate with the computer without having to know its languages

☐ **Operating systems:** Most computers are pre-loaded with operating systems. It varies as follows: **1 - Microsoft Windows:** It is used in 75% of computers globally "the most common".



2 - MacOS operating system: Apple devices and is used in 15% of the global market



b) Mobile operating systems:

1- Android system _ The most popular mobile operating system, accounting, is open source

2- Apple iOS __ It is used on iPhone devices, It is a closed source system



☐ **Open source and closed source operating systems:** **Open source system:** Anyone can read or change the programming code, **such as** the Android operating system

Closed source system: - The general public cannot see its programming code to change it, **such as** The Apple OS operating system



☐ **Mobile operating system functions:**

- Sending messages to
- Connecting to the Internet
- Video chat
- Touch work.

c) Advanced operating systems:

A - Robot Operating System (ROS): It is an open source program for building applications Robotic.

B - Self-driving car operating systems: developed by many companies, including: Apple, Microsoft, and Google, as well as private car companies.

☐ **Programming languages:** Programming languages give commands to a computer in the form of **code**.

- Programming languages have evolved overtime from simple machine language (binary system) **to high-level languages**.

- Programming languages are usually open source . Where anyone can see, modify or distribute the code. **Hypertext Markup Language HTML:** Programmers use it to create web pages. It is the most popular language due to its ease of learning and use.



Note: Most computers and applications work fine; Regardless of the operating system and programming language used .

Evaluation: Put (✓) or (x): - Programmers usually choose open source programming languages. ()

الفصل الدراسي الأول اعداد وتصميم/ جروب فريق أصدقاء الكمبيوتر المتخصص

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First Axis The role of information and communications technology in our lives

Lesson 8: Website Designing

Lesson objectives: By the end of this lesson the student will be able to:

- **Writes** Markup language code for basic parts of a web page
- **Specifies** Some components of the markup language of a web page
- **Innovates** An idea to create a website that promotes An advanced product in its category Assistive technology

Strategy: Dialogue and discussion – brainstorming - practical training

Teaching aids: Electronic whiteboard - Student's book - presentation

Warm Up : What are your three favorite websites? What do you like about them?

Lesson Presentation

❑ **HTML markup language:** It is the standard programming language used to create static web pages

❑ **HTML tags:** - Describes the appearance of a web page, and it consists of a series of basic elements to create it, such as: (headings, paragraphs, links, and images)

-Web browsers read documents written in Hypertext Markup Language

-Browsers display content according to the HTML tag

❑ **Hypertext Markup Language tags consist of three main parts:** -

*Openingtag

*Content

*Closingtag

❑ **HTML tags:-**

HTMLTag	Element	HTML Tag	Element
<h1> is the largest title </h1>	The largest address	<h> </h>	Titles
<p> We put paragraphs and sentences here </p>	text or paragraphs	<h2> Subtitle </h2>	Subtitle
 	Size and font size	<h6> is the smallest heading </h6>	Smallest address
	To add an image	 	font color
We write the property Src	For the name of the image	<i> Text </i>	bold writing (italics)
alt property	To describe the image	 text 	Bold writing
<a> 	Add a hyperlink		

❑ **Features of Hypertext Markup Language:**

-Dividing the elements of web pages in order to facilitate closer consideration, reading, and browsing.

-Helping visually impaired people distinguish between parts of a web page. Without Hypertext Markup Language tags, a screen reader reads everything displayed on the page without stopping. Using HTML tags, the screen reader pauses after each element.

-Image tagging: The hypertext markup language code will not be able to describe an image unless the alt text code is included, so it requires an image tag and an alt text tag.

❑ **To see alternative text for a web page:**

Right-click on one of the images, then choose Inspect. Search for the alt hypertext markup language tag

Things to consider when designing a website: **headline:** You should put the largest title on the page at the top to get attention.

Sub-headings: It facilitates careful examination of the text so that the reader can find the information he wants.

Pictures: attention and can trigger different emotions. **Text:** The text divided into paragraphs makes it easier for the reader to search for the information he wants.

Evaluation: **Complete:** Adding..... attention and can trigger different emotions

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First Axis The role of information and communications technology in our lives General review

Lesson objectives: By the end of this lesson the student will be able to:

- **Knows** some important terminology of the hub
- **He specifies** Some component of a web page's markup language
- **invent An idea** to create a website that promotes For an advanced product in its category Assistive technology

Strategy:

Dialogue and discussion – brainstorming - practical training

Teaching aids:

Electronic whiteboard - Student's book - presentation

Warm Up :

How can we use tools Information and communication technology to assist with the latest developments technological?

Lesson Presentation

Write and compare:

Write a sentence for each of the following pairs of phrases to explain the connection between them, then compare your sentences with the sentences of a colleague

- Wired and wireless networks
- Augmented reality and artificial intelligence.
- General databases and subject databases.

Read and answer:

- How does the modem work? Why is it necessary to connect to the Internet?
- What categories are used to rate user experience with assistive technology?
- What is virtual reality?
- What are databases?
- What are some common features of mobile devices?
- What is the programming language? Why do programmers choose a specific programming language?
- What is open source software?
- What are some of the HTTP Markup Language elements of websites?

Evaluation:

Evaluate students' answers



Axis 2



2

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Second Axis Digital security and safety precautions

Lesson 1: Active Explorer " Didi Al -Bavhaidi "

Lesson objectives: By the end of this lesson the student will be able to:

- **Identify** ways Remote Sensing would be useful for my governorate
- **Research** different applications.
- **Design** an application.

Strategy:

Dialogue and discussion - brainstorming - flipped class

Teaching aids:

The electronic board - Student's book - a video by Didi Al- Behaedi

Warm Up :

Do you, your parents or family members use an application to find your way? How useful is this app?

Lesson Presentation

❑ Miss Didi Al-Bayhaidi

- National Geographic **Explorer** She completed her PhD in Egyptian **Archeology** at the University of Chicago, USA
- She obtained her bachelor's and master's degrees in **computer science** from Stanford University, California, in the United States
- She works **asan expert _ Consultantly** in area Research sensor on after in NASA agency .Satellite
- It uses **geospatial technologies** in its work, such as Geographic Information System(**GIS**) and technology remote sensing(**RS**) and global positioning system(**GPS**).
- ← that help in drawing geographical maps of the Earth and **geospatial techniques**: Technologies **Geographic Information System Remote sensing** technology : including and analysis human societies **Global Positioning System**-



❑ The most important works of Miss / Didi Al Bihaidi:

- Excavations in many archaeological sites. She is also the co-director of **the Honorary Kom Project** in the city of Memphis, Egypt
- I worked in the Birkat Qarun area (Lake **Morris**) in Fayoum Governorate, Egypt. In order to know how the ancient Egyptians dealt with the decrease in water levels in the lake, in order to know how we are likely to face water issues in the future

❑ During its work, it always uses some devices and techniques, such as :

- ← Clarity of the Earth's surface, for examples superior images **Remote sensors** are devices that provide **Special cameras placed on satellites - Drones - Airplanes that collect electromagnetic radiation reflected from the Earth's surface**
- . **Maps and history to identify ancient lake shores and chart Al-Bayhaidi uses Sensor images**
- Al-Bayhaidi uses " **machine learning** " to locate unknown archaeological sites, where
 - a. Computers are used that analyze data and predict where you might find unknown archaeological sites
 - b. Then you enter the data of the known archaeological sites , and then program the computer to search for similar sites
- ❑ **Machine learning**: It is one of the branches of **artificial intelligence** Example... If you've ever used YouTube and received suggestions for other videos you might like, these videos appear through search data based on other viewers
- Published miss Al-Bayhaidi many from reportson her discoveries. Which You write texts And adjust Images using **device Computer Mobile and device _ iPad** then publish Her works in Magazines Scientific. Documented
- ❑ **Ms. Al-Buhaydi protects her information by** Use antivirus software Strong passwords on their devices Make sure to back up their data regularly
- Remote sensing technology**: It is the science of collecting information about an object without touching it through sensors..... **It helps us** collect data from dangerous or impossible to reach locations
- It is used** in various fields such as **meteorology**, **earth science**, and **geography** These devices **receive magnetic waves and convert them into signals that are displayed in the form of numbers or images.**

❑ Remote sensing devices :

- ← It can be installed remotely on towers, helicopters, airplanes and satellites
- ← Active sensors, such as radar, produce electromagnetic waves, transmit them, and then measure them
- ← Infrared remote sensors can penetrate the ground, so they are used in archaeological excavations

Evaluation: - **Complete**: The.....system is an example of geospatial techniques

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Second Axis Digital security and safety precautions

Lesson 2: How to deal with electronic games

Lesson objectives: By the end of this lesson the student will be able to:

- **Discusses** the Risks of electronic games
- **Explains** ways to avoid the dangers of electronic games
- **Specifies** The impact of electronic games on his health and explains ways to deal with this through family care

Strategy:

Dialogue and discussion - brainstorming - cooperative learning

Teaching aids:

Electronic whiteboard - Student's book - presentation

Warm Up :

In your opinion, why are electronic games so popular among individuals of your age?

Lesson Presentation

□ Electronic games

- These are games found on electronic devices that can be played with friends over the Internet and have some features such as:

- 1- Helps enhance critical and creative thinking
- 2- Encourages teamwork

- These games can be very entertaining, but they affect health and entail multiple risks.

□ Risks of electronic games

■ Physical risks:-

- Impairing the ability to sleep due to increased stimulation, which affects the sleep cycle
- The risk of weight gain as a result of not exercising and not paying attention to healthy eating habits while playing.
- Eye strain - Back problems - headache

■ Psychological risks:-

- Anxiety and depression
- Aggressiveness
- It may strain an individual's relationships with his family and friends

■ Security risks:-

- Multiplayer games can pose a significant security risk because:

If you share too much personal information in these games, you may give strangers access to your name, email, phone number, and address.

Large online gaming communities are full of cyberbullies and hackers who may leak your personal information, which makes viruses easy to spread.

□ Play electronic games responsibly

- Play and chat only with people you know and trust . - Do not publish your personal information Online
- Don't use your webcam unless your settings are private.
- Be careful not to replace real life activities with electronic

□ Note:-

Respecting time periods helps you avoid bad habits related to electronic gaming

Real life activities include spending time with family and friends, completing schoolwork, adopting a healthy diet, and following a moderate sleep regime

□ The role of the family in reducing the impact of electronic games:

- Do not be afraid to turn to your parents whenever you face any dangers, as they want to help you by: Family discussions Increased control over you when using the Internet

Evaluation: -Complete:

..... are games on electronic devices and can be played with friends over Internet



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Second Axis Digital security and safety precautions

Lesson 3: Protect yourself from digital theft

Lesson objectives: By the end of this lesson the student will be able to:

- **Identify** the different features that can be used to protect data
- **Discuss** his personal responsibilities for protecting his digital devices
- **Creates** an infographic to share information on how to protect devices from digital theft.

Strategy:

Dialogue and discussion - critical thinking - mind maps

Teaching aids:

Electronic board - Student's book - presentation - boards and pens

Warm Up :

How do you maintain the security of your digital ID?

Lesson Presentation

It is irresponsible to leave your private devices at risk without taking appropriate security measures.

You can effectively protect your devices from digital theft through many methods such as:

→ **Passwords:**

most secure password should consist of 8 random letters, numbers and symbols



→ **MFA multi-factor authentication:**

Multi-factor authentication requires **at least two ways to identify you**, usually through

- Passwords, PINs, security codes, or personal questions



→ **Fingerprint authentication** You usually scan your thumb, as a way to confirm your identity

→ **Face recognition** The facial recognition software will scan your face using your camera, allowing only your face to open your device or the apps on it



→ **Full disk encryption** Encryption scrambles your information so that only you can access it on your device, provided you set your password

If you suspect that your data has been compromised, you should

- Report data theft
- Tell a parent or a trusted adult so they can inform the relevant authorities
- Tell your family and friends you communicate with online



Note:-

- Companies especially need to protect their websites and customer information

- Egypt established a **personal data protection law** In 2020 to protect its citizens, it is a law that requires companies to use strict security principles and standards to protect their data

- If a company becomes a victim of data theft, they must report it immediately and notify their customers directly as well

Evaluation:- Put (✓) or (x): -

Methods for protecting your devices from theft are limited to multi-factor authentication only ()

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Second Axis Digital security and safety precautions

Lesson 4: Cyber Security

Lesson objectives: By the end of this lesson the student will be able to:

- **Known** Cyber security concept
- **Creates** a plan to deal safely with the Internet
- **Discuss** cybersecurity issues

Strategy:

Practical training - dialogue and discussion - critical thinking

Teaching aids:

Electronic whiteboard - Student's book - presentation

Warm Up :

What safety precautions do you take in real life?

Lesson Presentation

❑ **Cybersecurity:** It is the protection of systems, networks, devices, and data from electronic attacks that may be exposed to when using information and communications technology applications

❑ **Internet safety precautions:-**

- Use secure internet browsers such as **Google**, and antivirus software on your devices
- Allow only your friends and family to see your social media pages, keep your pages private
- Do not communicate with people you do not know or who make you feel uncomfortable
- Do not share your personal information online
- Use strong passwords and change them every three months
- Make sure that the sites you frequent are "genuine, safe, and appropriate for your age"
- Check the information you find to make sure it is accurate



❑ **Types of cyber threats:-**

1. **"Malware":** This is a dangerous cyber threat and you may fall victim to this software regardless of how careful you are. You can be exposed to these threats through the use of unsecured Wi-Fi networks.

Examples of malware:-

Scareware : It takes the form of viral alerts telling you to click on a link to get rid of this virus, but the link is the virus itself.

- Smartphone malware.

2. **"Spoofing":** Cybercriminals pretend to be a company or a famous person to force you to reveal your personal information or click on unsafe links.

If you do this, you are at risk of: your personal information being leaked...your money being stolen...the virus being installed on your devices



Common examples of impersonation:-

- Create fake domains that mimic legitimate businesses
- Create an email account with the name of a trusted service or even an individual you know personally

❑ **How to deal with cyber threats:-**

- .Stay calm and take immediate action such as warning acquaintances not to open any suspicious content
- .Use an anti-virus program to scan your computer and eliminate viruses
- .Update security settings and change passwords for all your accounts
- .Inform a trusted adult
- .Create your own personal online safety plan

Evaluation:- Put (✓) or (x):

Cybercriminals pretend to be a company or a famous person to force you to reveal your personal information ()

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Second Axis Digital security and safety precautions

Lesson 5: Copyright and electronic financial trading

Lesson objectives: By the end of this lesson the student will be able to:

- **Explain** what copyright is and why it is important
- **Discuss** the concept of electronic financial trading
- **specifies** Ways to maintain safety while using electronic financial trading applications

Strategy: Dialogue and discussion - brainstorming - question board

Teaching aids: Electronic board - Student's book - presentation - boards and pens

Warm Up : What is the impact of publishing information and ideas via the Internet on copyright?

Lesson Presentation

Copyright includes :-

- Copyright protects creators and gives them ownership rights to their works
- Intellectual rights: It is an invention, innovation, or idea of a person that is protected by law from being copied by another person, such as a specific individual or company
- Intellectual property rights include: written, visual and audio materials, video clips, and materials from the Internet
- **Creative Commons** " refers to works whose creator has given permission to share them "
- Works that have previously been approved for use, such as works found in data libraries, such as **the Egyptian Knowledge Bank**
- Egypt considers works **to be public property** if the author has been dead for at least 50 years
- These works do not require permission from the author

stock exchange:-

- It is a market in which buyers and sellers exchange units of the company's shares. These shares are called shares
- The Egyptian Stock Exchange gives citizens the opportunity to invest in various sectors such as food, clothing, or oil
- Investors in traditional environments rely on financial intermediaries

A broker:- They are individuals involved in buying and selling shares

Steps for smart investors to choose companies:-

- They research multiple companies before choosing which one to invest in
- They analyze the markets to know the fluctuations of companies' stocks
- They study the products and services offered by companies and their compatibility with their personal investment goals

Electronic financial trading:-

- Making the process of buying and selling stocks more effective as it is done via the Internet and investors have greater power
- Enables investors to execute deals independently through websites or applications
- It provides investors with easy-to-use alternatives, such as using advisory robots, although it is possible to use a financial intermediary
- It provides investment potential for a large group of individuals who may lack the means to invest
- It makes it easier for different companies to execute deals with each other quickly wherever they are in the world

Advice bots:- These are online applications that provide guidance and financial services

Electronic financial trading platforms have become common with the spread of the Internet

Evaluation :- Complete:..... Protect both printed and digital content .



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Second Axis Digital security and safety precautions

Lesson 6: Cloud Storage of Files

Lesson objectives: By the end of this lesson the student will be able to:

- **Explains** Cloud computing concept
- **Specifies** Pros and cons of using cloud computing
- **Discusses the** role of cloud computing in file storage

Strategy: Dialogue and discussion - brainstorming - question board

Teaching aids: Electronic board - Student's book - presentation - boards and pens

Warm Up : How do you store your information and files, such as photos, for example, digitally and in real?

Cloud Computing:-

Lesson Presentation

On-demand technology that allows data and programs to be stored and accessed by remote servers over the Internet

It allows the user to access files and data at any time and anywhere easily and conveniently **Examples of cloud computing service providers:-**

OneDrive



google Drive

Dropbox



You can access the OneDrive app through [Microsoft 365](#).

Remote servers enable users who are not connected to the local network to access and manage their data, files, and applications over the Internet

- ❑ **Data encryption:** It is the process of converting data into codes to prevent access to it by unauthorized parties
- ❑ **Pros and cons of using cloud computing:-**

Advantages	Disadvantage s
<ul style="list-style-type: none"> ▪ It improves the storage capacity on your devices by relying on cloud storage services ▪ It provides the ability to access files from multiple devices provided that they are connected to the Internet ▪ Provides backup copies of your files ▪ Provides an additional layer of security with password-protected data storage and data encryption ▪ Provides the ability to share files directly with authorized users 	<ul style="list-style-type: none"> ▪ It requires stable internet access, and when it is interrupted, you will not be able to access your files -stored in the cloud Cloud storage is a fee-based service, “ a certain amount for storing files,” and the more you need for -storage capacity, the higher the amount ▪ Cloud services are safe and secure, but there is a small risk, such as: If the cloud service you use is exposed to a data breach, this may reveal your information

❑ **Data encryption:-** It converts data into a code to prevent unauthorized user access.

❑ **Storing files in the cloud:-**

Cloud computing makes it possible to have a document management system to organize and quickly find documents by:

- Create separate folders for different data categories
- Separating school and personal information
- Naming folders and subfolders to make it easier for you to find what you are looking for
- Keep files in separate folders based on their types

❑ **How to protect files on computational storage platforms:**

- Create strong passwords for your accounts and files on computational storage platforms
- Use multi-factor authentication to provide additional protection.
- Use large, reputable cloud storage services that offer multi-factor authentication.

Evaluation: - **Complete** is the access by unauthorized parties to confidential data and information



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Second Axis Digital security and safety precautions

Lesson 7: Cloud Storage applications

Lesson objectives: By the end of this lesson the student will be able to:

- **Discuss** the characteristics of valuable or reliable sources
- **Explain** the importance of evaluating sources
- **Evaluate** the resources he finds on the Internet.

Strategy:

Dialogue and discussion - brainstorming - question board

Teaching aids:

Electronic board - Student's book - presentation - boards and pens

Warm Up :

How has cloud computing technology affected our daily lives?

Lesson Presentation

CloudComputing:

.It is storing data or programs and accessing them over the Internet

✍️: The most popular programs available for dealing with cloud computing applications

- 1- Microsoft365
- 2- GoogleWorkspace

✍️ Microsoft365 -: Provides a range of productivity applications such as -:

- MicrosoftTeams
- Word.word
- Power PointPowerPoint
- Excel_
- OneDrive_
- outlook Outlook

-:Note Word .To write down your thoughts, a story, or a school assignmentcan be used
PowerPoint helps I have to create a show OneDrive.helps Share your work with your colleagues outlook_.Email application

✍️ OneDrive : platform

- Allows you to store and share files
- Easy to use and can be accessed from any device

✍️ -:How to upload files or folders

- 1- Open theGoogle Chrome browser .
- 2- .Log in to Microsoft Office
- 3- .Choose OneDrive
- 4- .Choose Upload, then Upload files or folders
- 5- .Select the files or folders you want to upload
- 6- Choose to open or

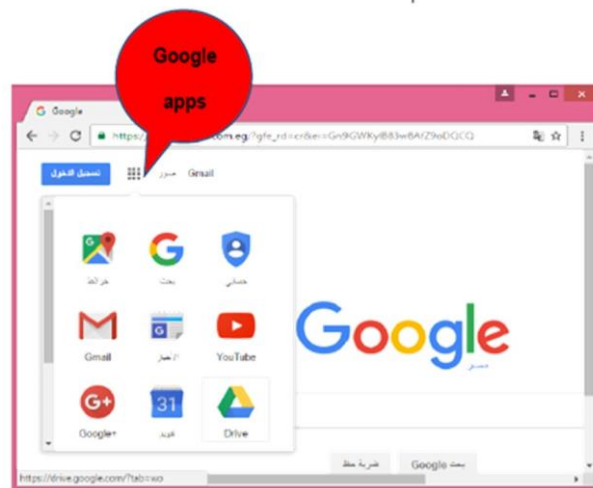
choose a folder**How to save a**

file inOneDrive -:

- 1- Choose a file, then save a copy, then chooseOne Drive
- 2- Choose "Enter file name" and type a name
- 3- .Choose Save

Evaluation

Complete:.....is storing data or programs and accessing them over the Internet



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Second Axis Digital security and safety precautions General review

Lesson objectives: By the end of this lesson the student will be able to:

- **Compare** different browsers
- **Specifies** Some sources of evaluation information .
- **Research** different applications.

Strategy:

Dialogue and discussion - brainstorming - question board

Teaching aids:

Electronic board - Student's book - presentation - boards and pens

Warm Up :

How can we use tools Information and communication technology Safely?

Lesson Presentation

Write and compare:

Write a sentence for each of the following pairs of phrases to explain the connection between them, then compare your sentences with the sentences of a colleague

- The physical dangers of electronic games and Psychological risks of electronic games
- Cybersecurity and impersonation
- Cloud storage and traditional storage

Read and answer: -

- Name one important ICT technology used by the active explorer in National Geographic, Miss Didi Al-Bayhaidi, to help her in her search.
- Give one example of how to confront the risks of electronic games.
- List two precautions you can take to prevent data theft.
- How can you protect yourself from hacking ?
- Describe a security feature provided by cloud computing?

Evaluation: Evaluate students' answers

